وزارة الصحة
Ministry of Health

وقاية
هيئة الصحة العامة
PUBLIC HEALTH AUTHORITY

Interim Guidelines for Monkeypox

V1.3

15 August 2022

The guidelines for Monkeypox were developed with the best available data and evidence. These guidelines will be updated as more information becomes available.

Versions Update

Version 1.0

- Was written and published on May 22ed,2022

Version 1.1

- Update the surveillance case definitions and reporting
- Update the reporting and investigation forms
- Added the discontinue isolation and transmission precautions
- Added the public health measures at ports of entry
- Added the contact tracing

Version 1.2

- Update the discontinue isolation and transmission precautions
- Added the handling of dead bodies

Version 1.3

- Update the introduction and the causative agent and natural host
- Update modes of transmission.
- Update the surveillance definitions of human cases of monkeypox
- Update the infection prevention and control
- Update monkeypox investigation form
- Added the vaccination

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Introduction:

Monkeypox is a viral illness first discovered in 1958 when two outbreaks of a pox-like disease occurred in colonies of monkeys in a research facility, so the name "monkeypox" comes from this event. In 1970, the first human case of monkeypox was recorded in the Democratic Republic of the Congo (DRC). It has become endemic in parts of Central and West Africa and most concentrated in the Democratic Republic of the Congo.

In 2003, the first monkeypox outbreak outside Africa was in the United States of America, with over 70 cases, and was linked to contact with infected pet prairie dogs. Monkeypox has also been reported in travelers from Nigeria to Israel and United Kingdom in sporadic cases between 2018 and 2022.

On 14 May 2022, a cluster of cases of monkeypox was reported in the United Kingdom, and these cases have no history of travel or travel-related case. Since the UK reporting of cases, several other countries have reported cases of monkeypox around the world, mainly in Europe and North America. All infections characterized so far among the recent clusters have been due to the West African clade. This is the first time that chains of transmission are reported outside Africa without known epidemiological links to West or Central Africa.

On 23 July 2022, the Director General of the World Health Organization (WHO) declared the current multi-country outbreak of monkeypox a Public Health Emergency of International Concern (PHEIC).

Coincident immunity to the monkeypox virus was previously achieved with vaccinia vaccination; however, eradicating smallpox and subsequent lack of vaccination efforts paved the way for monkeypox to gain clinical relevance.

The Causative Agent and Natural Host

Monkeypox virus is an enveloped double-stranded DNA virus that belongs to the Orthopoxvirus genus of the Poxviridae family, the same family of the virus that causes smallpox (eradicated in 1980). While monkeypox is not related to chickenpox, which is caused by the varicella virus, it is not an orthopoxvirus. Currently, two phylogenetically distinct clades have been identified: the Central African (Congo Basin) clade and the West African clade. The Central African clade is reported more frequently and severely than the West African clade. The case fatality ratio for the West African clade has been documented to be around 1%, whereas, for the Central African clade, it may be as high as 10%.

Monkeypox can infect various animal species, but the natural host is unknown. This includes rope squirrels, tree squirrels, Gambian pouched rats, sooty mangabey, and other species.

Modes of Transmission

Transmission of monkeypox virus occurs when a person comes into contact with the virus from an animal, human, or materials contaminated with the virus. The virus enters the body through broken skin (even if not visible), respiratory tract, or mucous membranes (eyes, nose, or mouth).

Human-to-human transmission

Human-to-human transmission occurs mainly through physical contact with a person having monkeypox symptoms or contact with contaminated surfaces or personal belongings. Transmission through respiratory droplets might occur when face-to-face contact with a person having monkeypox symptoms happens.

Animal-to-human (zoonotic) transmission

It is less likely in Saudi Arabia, and it may occur through bite or scratch, direct contact or indirect contact with body fluids, or cutaneous or mucosal lesion material of infected animals.

Signs and Symptoms

The incubation period

- Usually from 7 to 14 days but can range from 5 to 21 days.

After the incubation period, the illness typically lasts for 2−4 weeks of infection, and it can be divided into two periods:

The invasion period

- Usually lasts between 0-5 days.
- Characterized by fever, intense headache, lymphadenopathy, back pain, myalgia, and intense asthenia (lack of energy).
- Lymphadenopathy is a distinctive feature of monkeypox compared to other diseases that may initially appear similar (chickenpox, measles, smallpox).

The skin eruption period

- Usually begins within 1-3 days of the appearance of fever.
- Often beginning on the face and then spreading to other parts of the body including, palms of the hands, soles of the feet, oral mucous membranes, genitalia, and conjunctivae.
- The rash evolves through the following stages sequentially from macules (lesions with a flat base) to papules (slightly raised firm lesions), vesicles (lesions filled with clear fluid), pustules (lesions filled with yellowish fluid), and crusts which dry up and fall off.

Surveillance Definitions of Human cases of Monkeypox (MPX)

A suspected case is defined as:

A case that meets clinical **AND** epidemiological criteria

A confirmed case is defined as:

A person who meets the suspected case definition with laboratory confirmation (monkeypox PCR positive OR Isolation of monkeypox virus in culture) .

Clinical criteria:

Unexplained rash* (macular, popular, vesicular, pustular) **AND** one or more of the following:

1. high-grade fever(>38.2°C)
2. lymphadenopathy
3. intense headache
4. back pain/myalgia
5. intense asthenia (fatigue and lack of energy)

***Unexplained rash** is a rash for which the following common causes of acute rash do not explain the clinical picture: drug eruption, food allergy, varicella-zoster, herpes zoster, measles, herpes simplex, bacterial skin infections, primary or secondary syphilis; and any other locally relevant common causes of popular or vesicular rash.

In addition, An Unexplained rash includes Unexplained genital, ano-genital, or oral lesion(s) (for example, ulcers, nodules) or proctitis (for example, anorectal pain, bleeding)

Epidemiological criteria

- Close contact (including sexual contact) with suspected or confirmed cases within 21 days prior to the onset **OR**
- Recent history of travel to a country with detected confirmed cases within 21 days prior to the onset.

Reporting

Reporting of suspected cases

The monkeypox is an emerging incident, and suspected cases must be reported by all healthcare facilities using the notification form **immediately** to:

- Health Electronic Surveillance Network (HESN).
- Email the notification form immediately to:
  - Communicable diseases program at Clusters and /or Regional Health Directorates.
  - Coordinators at the Regional Health Directorate report to the Communicable Disease Department at MOH.

Note: Failure to report reportable infectious diseases by healthcare organizations and/or professionals is punishable by law**.**

Infection Prevention and Control

Monkeypox is believed to be transmitted between humans mainly via physical contact with a person having monkeypox symptoms or contact with contaminated surfaces or personal belongings. Transmission through respiratory droplets might occur when face-to-face contact with a person having monkeypox symptoms happens.

Early recognition and source control.

- Health care workers should be aware of the signs and symptoms of monkeypox and are encouraged to apply them to hospital visitors for early detection and isolation.
- Use of signage to remind HCWs of the signs and symptoms.
- Respiratory hygiene is another important measure that should be applied to all visitors.
- Whenever possible, patients identified as suspected monkeypox cases should be placed in a separate area from other areas of care.
- If a patient seeking care is suspected to have monkeypox, infection prevention and control personnel should be notified immediately.

Application of standard precautions for all patients.

Strict adherence to standard precautions should be followed whenever handling patients. These include:

- Proper hand hygiene.
- Use of Personal Protective Equipment's (PPEs) in a correct sequence (gowns, masks, goggles if splashes are expected, and gloves).
- Sharp safety.
- Aseptic technique.
- Environmental cleaning and disinfection.

Implementation of empiric additional precautions.

In addition to standard precautions, suspected cases should be placed under airborne, droplet, and contact precautions.

Patient placement:

- All cases should be placed in a single negative pressure room whenever possible.
- If the capacity doesn't allow it, the case should be placed in a single room with the use of a portable high efficiency particulate air (HEPA) filter.
- With the rapid influx of cases, chortling of cases in the same room should be considered with proper signage placed indicating care of cases.
- Cohorting of cases should be considered only when there is a significant shortage in single rooms with the following considerations:
  - Cohorting only for confirmed cases.
  - Place the patients with distance between beds.
  - Place physical separations between the beds.
  - Disallow any visitors or caregivers.
  - Avoid performing aerosol generating procedures inside the room.
  - Any aerosol generating procedures (AGPs) should be performed in a single bed negative pressure room.

Personal Protective Equipment PPEs:

- PPEs should be donned and doffed in correct sequence whenever handing suspected or confirmed cases.
- PPEs should be donned prior to entry to the isolation room and doffed prior to exit, except for the high particulate respirator, which should be removed after exit or in the ante room if available.
- Disposable gowns: use disposable gowns whenever care is provided to patients.
- High-efficiency particulate respirators: use fit-checked sealed masks whenever handling cases. If the mask doesn't match the size of the care provider, Powered Air Purifying Respirator (PAPR) should be used.
- Goggles and eye protection: whenever splashes are expected, use goggles and eye protection to minimize the risk of exposure.
- Gloves: use gloves whenever in contact with the patient, examining and contact with the patient surroundings.

Transportation of suspected and confirmed monkeypox patients:

- Patients' movements should be restricted as much as possible unless indicated.
- Use portable machines such as portable x-rays machines whenever investigations are required. If not available, transport the patient in a designated pathway that avoids crowded areas.
- Notify the receiving designation about the case to allow them to take the proper precautions prior to receiving the patient.
- Those who are transferring the patient should adhere to isolation precautions and wear proper PPEs, as well as placing an isolation transportation signage and ask the patient to wear surgical mask.
- Covering any of the patient's exposed skin lesions with a sheet or gown.

Environmental infection control measures:

- Ordinaries and workers responsible for cleaning and disinfection should wear appropriate PPEs when cleaning rooms housing patients.
- In-patient rooms should be cleaned and disinfected at least daily and at the time of patient transfer or discharge or when required.
- More frequent cleaning and disinfection may be indicated for high-touch surfaces and following aerosol producing procedures (e.g., tables, hard-backed chairs, doorknobs, light switches, remotes, handles, desks, toilets, sinks)
- Cleaning and disinfection of the environmental surfaces should be done with approved MOH registered hospital-grade with an emerging viral pathogen claims disinfectant, or with freshly prepared sodium hypochlorite solution 1000 ppm with consideration to the contact time in accordance with manufacturer's instructions for environmental surface disinfection.
- Activities such as dry dusting, sweeping, or vacuuming should be avoided. Wet cleaning methods are preferred.
- Care should be taken when handing used patient-care equipment in a manner that prevents contamination of skin and clothing.

- Ensure that used reusable equipment has been cleaned and reprocessed appropriately.
- Linens and clothing should be collected and put in bags inside the room before the cleaning process begins.
- Soiled laundry should be gently and promptly contained in an appropriate laundry bag and never be shaken or handled in manner that may disperse infectious material.
- Adherence to standard precautions when handling contaminated laundry that generated from Monkeypox cases and minimizing agitation of the contaminated items are considered sufficient to prevent the dispersal of potentially infectious aerosols.
- Contaminated clothing and linen should be washed in high temperature washing cycle.
- Transportation of food tray to the patients should be delivered from the food server' to the nurse and accordingly the nurse delivers it to the patient.
- Generated wastes from patients' room should be handled as infectious waste and discarded accordingly.

Visitation

Visitors to patients with monkeypox should be avoided to minimize risk of exposure and to prevent transmission of the infection. However, there is exception for those essential for the patient's care and wellbeing (such as parents of a child) according to their age or who are unable to advocate for themselves and it permitted after providing care giver (e.g., parents) a comprehensive education & training about the required isolation precautions and infection prevention & control recommendations.

Discontinue Isolation and Transmission Precautions

Confirmed Cases:

- All confirmed cases should be isolated in the healthcare facility.
- Discontinuity of isolation should be done in consultation with treating physician.
- Patients should remain under isolation and transmission precautions until resolution of the symptoms and the lesions have crusted, those crusts have separated, and the skin started to form a new layer underneath.

Suspected Cases:

- All suspected cases must be tested and isolated in the healthcare facility.
- If clinically unstable, the suspected case must be isolated in a hospital until the result becomes available and he/she will be managed accordingly.
- If the case is clinically stable, can be discharged to home if negative result appeared.
- In case of shortage in bed capacity, and the suspected case is clinically stable, home isolation may be considered based on the assessment of the public health team and approval from the regional command and control center and after providing the patient' appropriate education in regard to the isolation measures and until the result becomes available.
- If the result is positive, the suspected case is considered a confirmed case and managed accordingly.

Laboratory Diagnosis

Nucleic acid testing (NAT) is the primary diagnostic tool for Monkeypox. Clinical and epidemiological data should be considered, and collection of appropriate and sufficient specimens is important. Infection is confirmed by detection of Monkeypox virus (MPXV) using PCR.

Specimen collection

The best source of specimens for laboratory diagnosis of monkeypox infections is skin lesions. Specimens should be collected by trained staff wearing full PPE, including gowns, gloves, and masks.

Specimen Type for NAT testing

Lesion material is required for persons with active lesions or rash. Lesion material, scrapings, biopsy tissue (non-formalin fixed), lesion fluid can be collected. Collect specimens from at least 3 lesions and preferably from different sites on the body.

Collection of specimens and Storage

Collect the appropriate sample type in a sealed sterile container. Sample each lesion separately. For swabs, use sterile nylon, polyester, or Dacron swabs. Swabs intended for bacterial preservation, and cotton swabs should not be used. Use of liquid transport media might cause dilution of the specimen. Label the specimen with all the essential information. If multiple specimens are collected, please indicate the site of the collection for each one. Store refrigerated at (2-8°C) within an hour after collection (for up to 7 days). Freeze specimens at (-20°C or lower) for longer storage (up to 1 month).

Collection of specimens for nucleic acid testing

Appropriate equipment for specimen collection:

- Personal protective equipment
- A small scalpel blade or 25G needle
- Leak-proof sealed tubes
- Dry swabs
- A waterproof sharps container for needles, syringes, scalpels
- Waterproof plasters
- A sealable plastic specimen bag. Absorbent packaging material and a strong metal outer container plus biohazard tape to seal it and appropriate disinfectant solution to clean the outside before transport to the laboratory.

Procedure for collection of specimens for nucleic acid testing

- Wear appropriate personal protective equipment
- Gently deroof a vesicle using a syringe.
- Rub the base of the lesion firmly using a dry swab while rotating the swab to absorb fluid from the lesion onto the swab and to get the cellular material from the lesion base.

- Sample at least 3 lesions
- Place the swab into a sterile, leak-proof container.
- Label the tubes with patient information and site of collection, place them in the zip-lock plastic specimen bag, and seal them.
- Use waterproof dressing(s) to cover the deroofed lesions.
- After specimen collection, all protective materials (gloves, mask, gown, etc.) and all used collection materials must be placed in biohazard bags and autoclaved or incinerated prior to disposal. Use an appropriate sharps container to dispose of Needles and immediately autoclave.

Referral of samples to Public Health Laboratory:

1. In **HESN Plus** you can register the case and request the test **Monkeypox PCR** , select the type of samples, collection sites, and for the distention select Public Health Laboratory (PHL).
2. Label each specimen container with the patient's ID number, HESN requisition ID, and the date the sample was collected.
3. Store the samples at 2-8°C and ship to PHL on ice pack.
4. Lab Results will be reported to HESN Plus
5. The average Turnaround time (TAT) for the lab results is 48 Hours

Specimens Packaging and Shipment to the PHL laboratory:

All materials transported within and between laboratories should be placed in a secondary container to minimize the potential for breakage or a spill.

- Patient specimens from suspected or confirmed cases should be transported as UN3373, "Biological. Substance, Category B. All specimens being transported as UN3373 should have appropriate packaging, labelling and documentation.
- Specimens should be put in a sterile, leak-proof container screwed properly then sealed with Para film tape and placed in waterproof secondary container e.g., ziplock bags after which they should be put in a third container. Cooling agent should be outside the secondary container.
- Paper sheets should be sealed in waterproof bags and kept separated from the specimens
- Samples can be shipped free of charge via SMSA courier to Public Health Laboratory (PHL) as per regulations. Notify the PHL of the dispatch of the specimen and courier or airway bill number as appropriate.
- Shipment addressed to:

  Public Health Laboratory,
  Public health Authority,
  Al Aarid, Riyadh.
  phl@cdc.gov.sa.

The courier service is available for sample transportation and pickup locations throughout the country for the collection of samples from MOH and non MOH hospitals and other Health care facilities. Courier services are provided 24 hours / 7 days a week.

Public Health Measures at Ports of Entry (PoE)

In response to recent outbreaks of monkeypox disease in multi-country, The Kingdom of Saudi Arabia has implemented procedures for travelers arriving (directly or indirectly) from these countries (refer to the public health measures at ports of entry guideline).

Contact Tracing

Contact tracing is considered one of the most important public health measures to control the spread of communicable diseases. **A contact is defined** as a person who, in the period beginning with the onset of the source case's first symptoms, and ending when all scabs have fallen off, has had one or more of the following exposures with a probable or confirmed case of monkeypox:

- face-to-face exposure (including health care workers without respiratory protection)
- direct physical contact, including sexual contact
- contact with contaminated materials such as clothing or bedding

As soon as a suspected case is identified, contact identification, and contact tracing should be initiated and fill out the **List of Patient's Contacts** form. Contacts should be notified within 24 hours of identification. Contacts should be monitored at least daily for the onset of signs/symptoms for a period of 21 days from the last contact with a patient in the infectious period. The public health team at the regional health directorate is responsible for listing, tracing, and follow up looking for symptoms of household and other contacts of patients with monkeypox infection in the community. Regional public health teams should keep all lists of contacts in an excellent professional format.

Note: Healthcare contacts should follow the management of exposed healthcare workers (HCWs) to a monkeypox case in healthcare facilities.

Vaccination

Vaccination is one of the public health response measures to control the further spread of monkeypox infection with other public health measures, including surveillance, contact-tracing, isolation, and care of patients. As monkeypox is the same family of the virus that causes smallpox, the vaccines designed for smallpox will likely provide a degree of cross-protection. Previously, the vaccine used against smallpox in Africa proved to provide up to 85% effectiveness in preventing monkeypox infection. There are three generations of smallpox vaccines. Historically, the first and second generations are live smallpox vaccines (replication-competent) have been used for the population level. The first-generation vaccines are not recommended for monkeypox at this time, as they do not meet current safety and manufacturing standards. The second generation of smallpox vaccine (ACAM2000) and the third generation of smallpox vaccine name JYNNEOS (also known as Imvamune or Imvanex) are both can be used to prevent monkeypox infection, and the JYNNEOS vaccine has been approved for the prevention of monkeypox.

Use of JYNNEOS vaccine (Live, Non-replicating)

In the meantime, mass vaccination for the general population is not recommended for monkeypox disease outbreak control. However, it is recommended for a specific group of people with a high risk of monkeypox infection. In order to implement vaccination strategies, the JYNNEOS vaccine is used in the Kingdom of Saudi Arabia as the following:

Pre-exposure prophylaxis (Prep) – for the certain targeted at-risk group

- A vaccine is administered to people at high risk of monkeypox (for example, laboratory workers that handle monkeypox-contaminated specimens or healthcare personnel who deal with monkeypox cases for performing diagnostic testing).
- Currently, most clinicians and laboratories are not advised to receive monkeypox vaccines as preventative measures because they do not perform the orthopoxvirus generic test.

Post-exposure prophylaxis (PEP) – for close contact with a confirmed case

- It is appropriate to consider this approach to be "standard PEP" for monkeypox during the current outbreak. In order to prevent monkeypox virus infections, vaccination is available following exposure to monkeypox. Identifying contacts of confirmed monkeypox cases is crucial for offering PEP vaccines and monitoring early symptoms.
- For the public: The vaccine is given to anyone who has been exposed to high-risk direct contact of a confirmed case (according to the assessment of public health), including contact with skin lesions, exposure to body fluids, and sexual intercourse.
- For healthcare workers: The vaccine is given to anyone exposed to medium or high-risk unprotected contact of a confirmed or probable case (according to the assessment of infection control in the facility).
- The vaccine should give as soon as possible, and for the best chance of preventing the onset of the disease, the vaccine should be given within four days of exposure.
- The vaccination may reduce symptoms of the disease when administered within 4 to 14 days of exposure, but it may not prevent it.
- PEP, however, is a useful tool for controlling outbreaks of monkeypox and preventing further transmission when used in conjunction with self-isolation and other prevention procedures.

Handling of Dead Bodies

Strict compliance to standard precautions with appropriate use of personal protective equipments and safety features is considered a significant measure in dealing with all post-mortem procedures.

If it is applicable, healthcare workers (HCWs) with an up-to-date smallpox vaccination (within three years) should participate in autopsy or mortuary care for patients with confirmed or suspected monkeypox.

Dealing with Dead Bodies

- Dead bodies of monkeypox confirmed or suspected patients could pose a risk of infection transmission.
- Personnel who perform post-mortem care of remains should wear PPE as recommended for Standard, Contact, and Airborne transmission-based Precautions.
- Isolation precautions should be continued for the deceased monkeypox confirmed or suspected case.
- Cadaver bags that fulfill MOH-approved specifications should be used for transport of dead bodies of deceased monkeypox patients, and those handling the body at this point should use PPE (fit-tested seal checked respirator or powered air-purifying respirators (PAPR) [for personnel who cannot wear respirators because of facial hair or other fit-limitations], clean gloves, and isolation gown).
- The trolley carrying the body must be disinfected post transportation.
- Only experienced morgue staff are dealing with bodies of deceased monkeypox patients, the morgue's staff should be well trained, and familiar with standard precautions and transmission-based precautions while handling dead bodies, especially hand hygiene, safe and proper use of PPE.
- The morgue's staff should be informed about the infectious status of the deceased, the risk of infection, and appropriate precautions required through the use of the morgue's transportation card attached to the dead body or the bag about the disease and transmission-based precautions required.
- Prevents relatives from direct surface contact with the body, such as touching or kissing it. However, it is acceptable to open the body bag for family viewing while wearing PPE (surgical mask, isolation gown, and clean gloves)
- Limit the number of morgue's personnel dealing with the dead body to the minimum number required.
- All persons performing or attending the body washing and preparation should wear PPE (fit-tested seal checked respirator or powered air-purifying respirators (PAPR) [for personnel who cannot wear respirators because of facial hair or other fit-limitations], isolation gown, and clean gloves, plastic apron and eye protection) and should perform hand hygiene after removal of the gloves and when required.
- Body Washing of monkeypox confirmed or suspected dead bodies should be done at hospitals and is not allowed to be transferred to home or public washing authorities.

Appendixes:

نموذج الإبلاغ الفوري لحالة مشتبهة بمرض جدري القردة في المملكة العربية السعودية
Immediate Notifiable Form for A Suspected Case of Monkeypox in Saudi Arabia

Date of notification: dd/mm/yyyy **Time:**	تاريخ الإبلاغ: يوم/شهر/سنه وقت الإبلاغ:
Epidemiological week:	الأسبوع الوبائي رقم:
Reporting person:	اسم المبلغ:
Reporting facility:	الجهة المبلغة:
Reporting address:	عنوان المبلغ/الجهة:
Reporting contact number:	رقم التواصل للمبلغ/للجهة:
Suspected case information	معلومات الحالة المشتبهة
Name: **Sex:**	الاسم:
Date of birth: dd/mm/yyyy **Age:**	تاريخ الميلاد: يوم/شهر/سنه العمر:
Nationality:	الجنسية: الجنس:
ID type: (specify) **ID number:**	رقم الهوية/الجواز: نوع الهوية: (الرجاء التحديد)
Contact number(s):	رقم التواصل:
Address: city ..... Dist&St. .....block	العنوان: المدينة ..... الحي والشارع..... رقم المنزل.....
PHC in patient's resident area	المركز الصحي في منطقة سكن المريض:
Healthcare worker: □Yes □ No (specify occupation)	عامل في الرعاية الصحية: □ نعم □ لا (الرجاء تحديد المهنة)
Workplace/ study	مكان العمل / الدراسة:
Clinical Data **Signs and Symptoms**	البيانات الاكلينيكية الاعراض والعلامات
Fever? □ **Yes, onset:** dd/mm/yyyy **Temperature** ..... c^0 □ **No**	حمى؟ □ نعم، إبتداءً من: يوم/شهر/سنه درجة الحرارة ..... □ لا
Headache ? □ **Yes, onset:** dd/mm/yyyy □ **No**	صداع؟ □ نعم، إبتداءً من: يوم/شهر/سنه □ لا
Back pain? □ **Yes, onset:** dd/mm/yyyy □ **No**	الم في الظهر؟ □ نعم، إبتداءً من: يوم/شهر/سنه □ لا
Mylagia? □ **Yes, onset:** dd/mm/yyyy □ **No**	آلام في العضلات؟ □ نعم، إبتداءً من: يوم/شهر/سنه □ لا
Exhaustion? □ **Yes, onset:** dd/mm/yyyy □ **No**	التعب والارهاق؟ □ نعم، إبتداءً من: يوم/شهر/سنه □ لا
lymphadenopathy? □ **Yes, onset:** dd/mm/yyyy □ **No**	انتفاخ في الغدد اللمفاوية؟ □ نعم، إبتداءً من: يوم/شهر/سنه □ لا
Rash? □ **Yes, onset:** dd/mm/yyyy □ **No**	طفح جلدي؟ □ نعم، إبتداءً من: يوم/شهر/سنه □ لا
Description of rash: □ **Macular** □ **Papular** □ **Vesicular** □ **Pustular** □ **Maculopapular** □ **Vesiculopustular**	وصف الطفح الجلدي: □ حطاطي □ بقعي □ حويصلي □ بقعي حطاطي □ حويصلي صديدي
Other (Specify)?..... □ **Yes, onset:** dd/mm/yyyy □ **No**	أخرى (حدد)؟..... □ نعم، إبتداءً من: يوم/شهر/سنه □ لا
Smallpox vaccination status? □ **vaccinated, year ( )** □ **unvaccinated** □ **Unknown**	حالة التحصين للقاح الجدري؟ □ مطعم بتاريخ (السنة): □ غير مطعم □ غير معروف
History of Contact with a confirmed or suspected case? □ **Yes, date: / /** □ **No**	مخالطة مع حالة مؤكدة أو مشتبهة بمرض جدري القردة خلال 21 يوم السابقة؟ □ نعم، التاريخ: / / □ لا
History of international travel in the last 21 days? □ **Yes, last date: / / From:** □ **No**	تاريخ القدوم من خارج المملكة خلال 21 يوم السابقة؟ □ نعم، التاريخ: / / دولة القدوم: □ لا
Has the case been isolated? □**Yes, place of isolation:** (specify location) □ **No**	هل تم عزل الحالة؟ □ نعم، مكان العزل :(الرجاء التحديد المكان) □ لا
Was a sample taken? □**Yes, name of a receiving lab:** □ **No**	هل تم أخذ عينة؟ □ نعم، اسم المختبر المرسل له: □ لا

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PUBLIC HEALTH AUTHORITY

نموذج تقصي حالة بشرية من جدري القردة
Monkeypox Investigation Form

Notification			بيانات المبلغ
اسم من قام بتعبئة النموذج Name of who completed the form		الهاتف Contact number	
التاريخ Date		الايميل Email	
المنشأة الصحية Hospital Name		المدينة City	
وصف الحالة وقت تعبئة هذا النموذج At the time of this report, is the case?	☐ Confirmed مؤكدة ☐ Case under investigation تحت الدراسة		☐ Suspected مشتبهة ☐ Not a case مستبعدة

Patient Information			بيانات المريض
الاسم الكامل Full name		تاريخ الميلاد Date of Birth	سنة yyyy/_____شهر mm/_____يوم dd_____
الجنسية Nationality		العمر Age	
رقم الهوية Identification number:		الحالة الاجتماعية Marital status	
المهنة Occupation	☐ HCW ممارس صحي ☐ Non-HCW ليس ممارس صحي	الجنس Sex	☐ Male ذكر ☐ Female انثى
الهاتف Phone Number		هاتف إضافي Additional No.	
العنوان Address	House No.رقم المنزل:_____ Street name اسم الشارع:_____ District الحي_____ City المدينة:_____ Province/Region المنطقة/المحافظة:_____		
المرحلة التعليمية Education			

Clinical Information			البيانات السريرية		
Date of symptoms onset تاريخ بداية الاعراض			سنة yyyy_____/شهر mm_____/يوم dd_____		
Symptoms الاعراض	Yes	No	Symptoms الاعراض	Yes	No
حمى أكثر من 38.2 Fever >38.2º	☐	☐	الم في الحلق Sore throat	☐	☐
صداع Headache	☐	☐	طفح جلدي (مسطح وغير ناتئ) Macular Rash (lesions with a flat base)	☐	☐
تضخم الغدد اللمفاوية Lymphadenopathy	☐	☐	صفح جلدي (ناتئ عن سطح الجلد) PapularRash (slightly raised firm lesions)	☐	☐
الم في الظهر back pain	☐	☐	بثور مع سوائل صافية Vesicular Rash (lesions filled with clear fluid)	☐	☐
آلام العضلات myalgia	☐	☐	بثور مع سوائل صفراء Pustules Rash (lesions filled with yellowish fluid)	☐	☐
اجهاد Exhaustion	☐	☐	قشور جافة Crusts which dry up and fall off.	☐	☐
اعراض أخرى (حدد) Other (specify)					

Hospitalization Information — بيانات التنويم

هل تنوم المريض في المستشفى؟ Is/was the patient hospitalized?	☐ نعم, بتاريخ ____/____/_____ ☐ لا ☐ Yes, Date of admission ____/____/_____ ☐ No

هل لايزال المريض منوم في المستشفى؟ Still admitted in the hospital?	خروج؟ Discharged ?	منوم في العناية المركزة؟ Admitted to ICU?	متوفى؟ Patient died?
☐ Yes نعم ☐ No لا	☐ Yes نعم ☐ No لا	☐ Yes نعم ☐ No لا	☐ Yes نعم ☐ No لا

الامراض المصاحبة (اختر كل ما ينطبق)
Comorbid conditions (check all that apply)

☐ None لا يوجد ☐ Unknown غير معروف ☐ Pregnancy حمل ☐ Diabetes سكري ☐ Cardiac disease امراض قلب
☐ Hypertension ضغط دم ☐ Chronic pulmonary disease امراض رئة مزمنة ☐ Chronic kidney disease امراض كلى مزمنة
☐ Chronic liver disease امراض كبد مزمنة ☐ Obesity السمنة ☐ Smoking (any type) تدخين من اي نوع
☐ Immunocompromised ضعف مناعة ☐ Other أخرى :_____

Epidemiological Information — البيانات الوبائية

تاريخ السفر
Visiting and Travel History:

هل سافر المريض خارج المملكة خلال 21 يوم السابقة لبداية الاعراض ؟ Did the patient travel in the 21 days prior to illness onset?	☐ Yes نعم ☐ No لا ☐ Unknown غير معروف

If yes,ان كان نعم
Trip1 رحلة : Dates of travel من تاريخ : ___/___/____ to الى ___/___/____ Country الدولة_____City المدينة_____
Trip2 رحلة : Dates of travel من تاريخ : ___/___/____ to الى ___/___/____ Country الدولة_____City المدينة_____
Trip3 رحلة : Dates of travel من تاريخ : ___/___/____ to الى ___/___/____ Country الدولة_____City المدينة_____

هل خالط المريض خلال 21 يوم قبل بداية الاعراض أي شخص سافر خارج اللمملكة؟
In the 21 days prior to illness onset, did the patient have close contact with someone who travelled outside the Country?

☐ Yes نعم ☐ No لا ☐ Unknown غير معروف
Please describe individual (including travel location) التفصيل

اذا كان المريض حاج او سائح، اكمل ما يلي
If the patient was tourist/pilgrim, please complete information bellow

وسيلة القدوم للمملكة Did the patient travel with?	☐ Airline الجو ☐ Ship البحر ☐ Busباص ☐ Car سيارة ☐ Otherاخرى____

معلومات الناقل
Airline Information

Airline Name اسم الناقل _____ Flight Number رقم الرحلة _____ Origin محطة المغادرة _____

Date of arrival تاريخ الوصول الى المملكة: ___/____/____ Date of departure تاريخ المغادرة الى المملكة: ___/____/____
Transit destination محطات عبور :_____

Other Trans Information بيانات أخرى عن محطات العبور .....

Type of transportation وسيلة النقل _____. .Date of arrival تاريخ الوصول : _____/_____/_____
Port of entry منفذ الدخول : _____ Origin محطة المغادرة : _____

Resident Information after arrival بيانات المسافر بعد الوصول للمملكة

Name of resident (hotel, Hajj campaign, ..etc.) (فندق، حملة حج...) اسم مقر السكن : _____
where موقع مقر السكن : _____
Date of check in تاريخ الدخول : _____/_____/_____ Date of check out تاريخ المغادرة: _____/_____/_____
Note: (Describe the timeline of contact movement) وصف الإقامة

Contact Exposure and Social History	بيانات المخالطة والتاريخ الاجتماعي
هل حصل المريض علي لقاح الجدري؟ Did the patient receive vaccination against Smallpox?	☐ Yes, Date (Year) ـــــ (سنة) نعم ☐ No لا ☐ Unknown غير معروف
هل خالط المريض أي حالة مشتبهة أو مؤكدة خلال 21 يوم التي سبقت ظهور الاعراض؟ Did the patient have contact with a known or suspect case, or with any sick person before becoming ill (21 days prior to illness onset)?	☐ Yes نعم Date بتاريخ: ـــــ ـــــ ـــــ ☐ No لا ☐ Unknown غير معروف
هل هو/هي نشط جنسيا خلال 21 يوم التي سبقت ظهور الاعراض؟ Sexually active within ≤ 21 days prior to symptom onset	
☐ Yes نعم ☐ No لا ☐ Unknown غير معروف *اذا كان نعم فالرجاء تحديد نوع الجنس* *If yes, select sex of sexual partner(s)*	
هل كان هناك أي مخالطة بمصدر حيواني محتمل خلال 21 يوم التي سبقت ظهور الاعراض؟ Contact with possible animal source within ≤ 21 days prior to symptom onset?	
☐ Yes نعم ☐ No لا ☐ Unknown غير معروف *اذا كان نعم فالرجاء الوصف* If yes, please describe	
هل خالط المريض اشخاص آخرين بعد ظهور الاعراض عليه؟ Did the patient have contact with anyone during illness period?	
☐ Yes نعم ☐ No لا ☐ Unknown غير معروف *اذا كان نعم فيتم اكمال قائمة المخالطين في الصفحة الاخيرة* *If yes, please complete the list of patient contact in the end of report*	
هل تواجد المريض في أي تجمعات عامة خلال 21 يوم قبل ظهور الاعراض او بعد ظهور الاعراض (مثل احداث رياضية، اعراس، احتفالات، حج او عمرة) In the 21 days before or after becoming ill, did the patient attend a public event where a large number of people were present (i.e., a sporting event, wedding, concert, Hajj and Umrah)?	
☐ Yes نعم ☐ No لا ☐ Unknown غير معروف اذا كان نعم فما هو وصف هذا التواجد If yes, please describe the event (include date and location)	
هل تواجد المريض في أي منشأة صحية خلال 21 يوم قبل ظهور الاعراض او بعد ظهور الاعراض In the 21 days before or after becoming ill, did the patient visited any healthcare facility or setting?	
☐ Yes نعم ☐ No لا ☐ Unknown غير معروف اذا كان نعم فما هو وصف هذا التواجد If yes, please describe the event (include date and location)	

List of Patient's Contacts قائمة المخالطين					
الاسم Name of contact	صلة القرابة Relation to patient	تاريخ آخر مخالطة Last contact date	المدينة City	الجنس Sex	الهاتف Phone
		____/___/____		☐ Male ذكر ☐ Female أنثى	
		____/___/____		☐ Male ذكر ☐ Female أنثى	
		____/___/____		☐ Male ذكر ☐ Female أنثى	
		____/___/____		☐ Male ذكر ☐ Female أنثى	
		____/___/____		☐ Male ذكر ☐ Female أنثى	
		____/___/____		☐ Male ذكر ☐ Female أنثى	
		____/___/____		☐ Male ذكر ☐ Female أنثى	

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SAMPLE COLLECTION GUIDE IN MONKEYPOX PATIENTS

METHODS OF SAMPLE COLLECTION

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There are different methods of sample collection depending on the stage of the disease. The best samples are those taken from the lesions

1- Oropharyngeal swabs:
they can be of beneficial in the early stage of the disease or the febrile stage but negative results should be interpreted carefully.

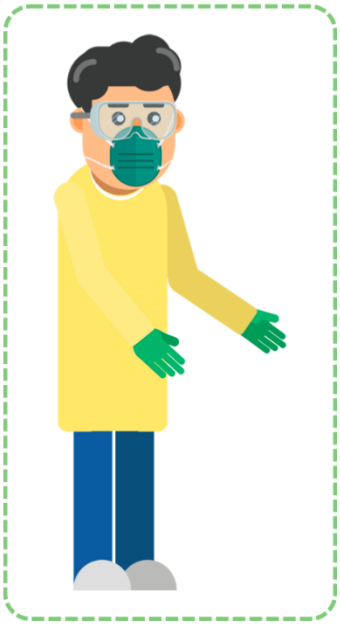
2- Lesion fluid and roof sample:
are considered the best methods during the formation of vesicular or pustular rash.

3- Crust sample:
are considered the best method during the formation of crust.

FEBRILE STAGE
1 - 4 days

VESICULAR OR CRUST
2-4 weeks

PROPER PPEs



Adherence to proper personal protective equipment in addition to proper hand hygiene are necessary to protect health workers assigned to collect the sample.

1- GOWNS

Long sleeved gowns should be donned to protect clotheing from any splashes generated.

2- N95 or PAPR:

Should be used duo to the possibility of airborne transmission of the virus.

3- GOGGLES:

Should be used to protect the eyes from any splashes that can be generated.

4-GLOVES:

Gloves should be donned when collecting the sample to prevent any contact with the patient's lesions.

IMPORTANT POINTS

- Always remeber to label tubes or container properly with patient information prior to the collection of the sample.
- Discard generated wastes (e.g. used PPEs and used alcohol pads) as medical wastes.

MATERIALS NEEDED

Dry polyester swab

ALCOHOL PAD

SCALPEL

O-RING SCREWED CAP CONTAINER

OROPHARYNGEAL SWAB

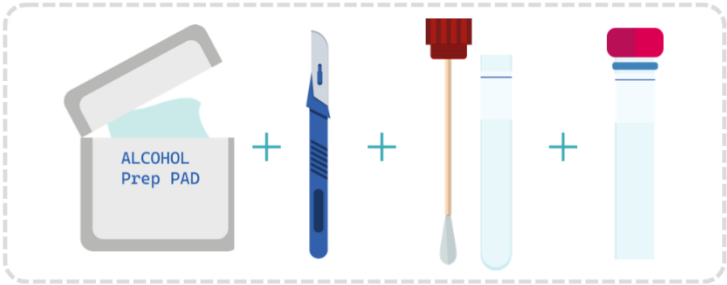
Step 1: Perform Hand Hygiene Wear Proper PPEs

Step 2: prepare your material (dry polyester swab or dry swab)

Step 3: Swab Throat and place the swab inside the container

LESION ROOFS AND FLUID SWAB

Step 1: Perform Hand Hygiene Wear Proper PPEs

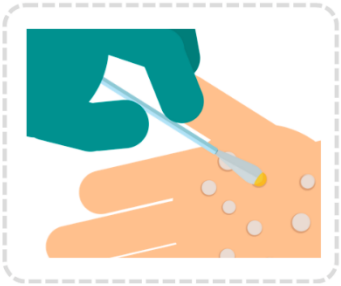


Step 2: prepare your material (alcohol wipe, scalpel dry polyester swab, screw capped plastic tube with O-ring)

LESION ROOFS AND FLUID SWAB

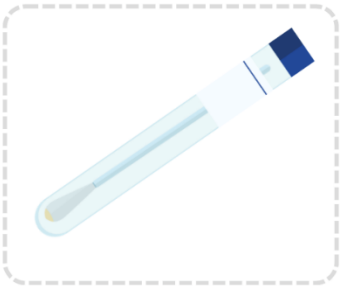
Step 3: Sanitize the lesions

Step 4: Remove the roof of the lesion

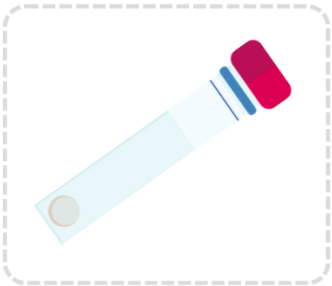


Step 5: Brush the base of the lesion vigorously

LESION ROOFS AND FLUID SWAB



Step 6: Place the swap inside the container.



Step 7: Put the Roof of the lesion inside the O-ring container if needed for testing

LESION CRUSTS

Step 1: Perform Hand Hygiene Wear Proper PPEs

Step 2: prepare your material (alcohol wipe, scalpel , screw capped plastic tube with O-ring)

LESION CRUST

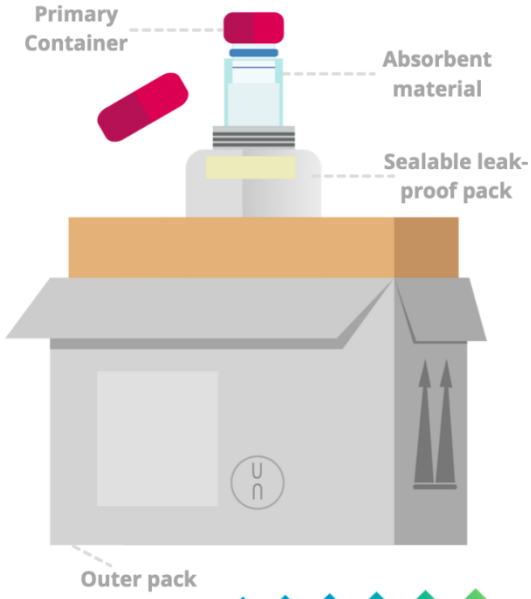
Step 3: Sanitize the lesions

Step 4: Remove the crust of the lesion

Step 5: Place the crust inside the O-ring container

PACKAGING AND TRANSPORT

- Samples should be identified as Infectious Substances (Monkeypox sample).
- Place the specimens in a tightly sealed, watertight primary container, such as a leak-proof screw-cap plastic tube, and seal the cap with Parafilm/tape.
- Place the wrapped, sealed primary container into a watertight, screw-cap mailing tube or metal can.
- On the outside of the secondary container, attach the specimen labels and other relevant information.
- Place the second container in a secure box for shipment in a cold container (2-8°C) with an ice pack or dry ice if the sample is frozen.
- Arrange shipping with the courier.



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حافظ على نظافة يديك دائماً

قبل الأكل وإعداد الطعام أو بعد العطس، السعال،
أو استخدام دورات المياه

كيف تغسل يديك؟

عند استخدام الماء والصابون

بلل يديك بالماء

وضع مقداراً من الصابون

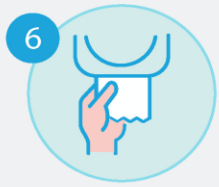
افرك اليدين

افرك ظهر وما بين الاصابع

وظهر اليدين

افرك إبهام اليد
بشكل دائري

اشطف يديك



جفف يديك

يديك آمنه عند جفافها

تحتاج 40-60 ثانية

كيف تفرك يديك؟

عند استخدام المعقم

ضع مقداراً من المطهر

افرك اليدين وظهر اليدين

وما بين الاصابع

افرك اليد بحركة دائرية

يديك آمنه عند جفافها

تحتاج 20-30 ثانية

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Keep your Hands Always

Clean before eating, preparing food, or after sneezing, coughing, and using toilet

How to handwash?

When using water and soap

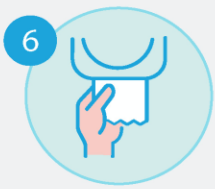
Wet hands with water

Then apply enough soap

Rub hands palm to palm
Rub back of the hands

Between fingers
Backs of fingers

Rinse your hands



Dry your hands

Once dry, your hands are safe

It is need 40-60 seconds

How to handrub?

When using hand sanitizers

Apply a palmful of the product

Rub back of the hands
Between fingers

Rub hands palm to palm

Once dry, your hands are safe

It is need 20-30 seconds

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للممارسين الصحيين:
اللحظات الخمس
لغسل اليدين وتعقيمهما

استخدم الماء والصابون أو المعقم الكحولي لتطهير وتعقيم يديك

1 قبل ملامسة المريض
(لحماية المريض من الجراثيم الموجودة على يديك)

2 قبل القيام باجراء تنظيفي أو تطهيري
(لحماية المريض من دخول الجراثيم الضارة الى جسده بما في ذلك الجراثيم التي يحملها هو نفسه)

3 بعد التعرض أو احتمال خطر التعرض لملامسة سوائل المريض
(لحماية نفسك وبيئة تقديم الرعاية الطبية من جراثيم المريض)

4 بعد ملامسة المريض
(لحماية نفسك وبيئة تقديم الرعاية الصحية من جراثيم المريض)

5 بعد ملامسة الأشياء الموجودة حول المريض
(لحماية نفسك وبيئة تقديم الرعاية الصحية من جراثيم المريض)

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For Healthcare Workers:
My 5 Moments for Hand Hygiene

Use alcohol-based hand rub or wash hands with soap and water

1 Before touching the patient
(To protect the patient against germs carried on your hands)
2 Before clean/aseptic procedure
(To protect the patient against germs including the patient's own, from entering his/her body)
4 After touching the patient
(To protect yourself and the healthcare environment from the patient's harmful germs)
3 After body fluid exposure risk
(To protect yourself and the healthcare environment from the patient's harmful germs)
5 After touching the patient's surroundings
(To protect yourself and the healthcare environment from the patient's harmful germs)

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CORRECT SEQUENCE FOR DONNING PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the type of precaution required; e.g., Standard and Contant, Droplet or Airborne Precautions

Remove hand jewellery & tie back hair

Clean and dry hands thoroughly

1

Gown /Apron

Fully cover torso from neck to knees, arms to end of wrists,and wrap around the back fasten in back of neck and waist

2

Mask Or Respirator

Secure ties or elastic bands at middle of head and neck
Fit flexible band to nose bridge
Fit snug to face and below chin
Fit check respirator

3

Goggles Or Face Shield

If you wear glasses put them on.
Place goggles or face shield over face and eyes and adjust to fit

4

Gloves

Extend to cover wrist

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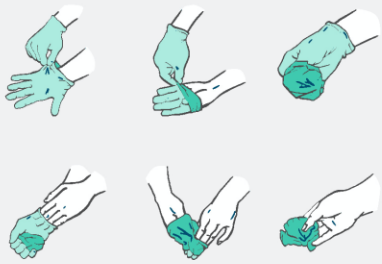
CORRECT SEQUENCE FOR DOFFING PERSONAL PROTECTIVE EQUIPMENT (PPE)

GLOVES

Outside of gloves are contaminated-
DO NOT TOUCH!

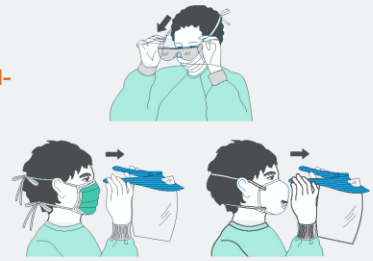
- Grasp outside of glove with opposite gloved hand; peel off.
- Hold removed glove in gloved hand.
- Slide fingers of ungloved hand under remaining glove at wrist.
- Peel glove off over first glove.
- Discard gioves in waste container.
- Clean and dry your hands thoroughly.



GOGGLES OR FACE SHIELD

Outside of goggles or face shield are cotaminated-
DO NOT TOUCH!

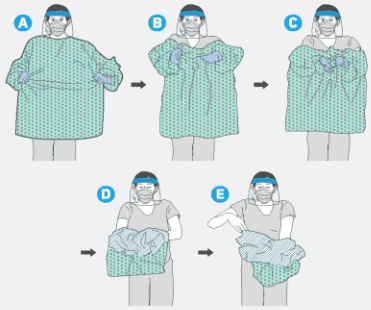
- To remove, handle by head band or ear pieces
- Place in designated receptacle for reprocessing or in waste container.
- Clean and dry your hands thoroughly.



GOWN/ APRON

Gown front and sleeves are contaminated-
DO NOT TOUCH!

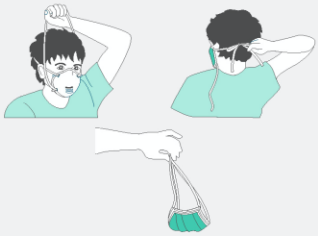
- Unfasten ties.
- Pull away from neck and shoulders, touching inside of gown only.
- Turn gown inside out.
- Fold or roll into a bundle and discard.
- Clean and dry your hands tharoughly.



MASK OR RESPIRATOR

Front of mask/respirator is contaminated-
DO NOT TOUCH!

- Grasp bottom, then top ties or elastics and remove.
- Discard in waste container.
- Clean and dry your hands thoroughly.



WASH HANDS

OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE

Keep your Hands Always Clean before eating, preparing food, or after sneezing, coughing, and using toilet

References:

1. "Monkeypox," Centers for Disease Control and Prevention, 31 July 2022. [Online]. Available: https://www.cdc.gov/poxvirus/monkeypox/symptoms.html.
2. "Monkeypox," World Health Organization, 14 June 2022. [Online]. Available: https://www.who.int/news-room/fact-sheets/detail/monkeypox.
3. "Epidemiological update: Monkeypox outbreak," European Centre for Disease Prevention and Control, 20 May 2022. [Online].
4. "Monkeypox," UK Health Security Agency, 18 May 2022. [Online]. Available: https://www.gov.uk/guidance/monkeypox#transmission.
5. Sklenovská N, Van Ranst M. Emergence of Monkeypox as the Most Important Orthopoxvirus Infection in Humans. Front Public Health. 2018;6:241. Published 2018 Sep 4. doi:10.3389/fpubh.2018.00241
6. Monkeypox Autopsy and Handling of Human Remains,CDC, Autopsy and Handling of Human Remains | Monkeypox | Poxvirus | CDC
7. National Monkeypox Public Health Response Guidelines, - Nigeria Centre for Disease Control (2019). https://ncdc.gov.ng/themes/common/docs/protocols/96_1577798337.pdf